

Pressure Sensors

180PC Series

Miniature Absolute, Differential, Gage/Amplified



Terminal Mount

Housing Mount

FEATURES

- Miniature plastic package
- Terminal and housing mount styles
- PCB termination
- Fully signal conditioned

180PC SERIES PERFORMANCE CHARACTERISTICS at 8.0 ±0.01 VDC Excitation, 25°C

	Min.	Typ.	Max.	Units
Excitation	7.00	8.00	16	VDC
Supply Current	---	---	6	mA
Current Sourcing Output	---	---	10	mA
Null Offset (184/185PC)	0.95	1.00	1.05	V
Null Offset (186PC)	3.45	3.50	3.55	V
Null Offset				
185PC15AT @ 2 psia	1.62	1.67	1.72	V
185PC30AT @ 2 psia	1.28	1.33	1.38	V
Output at Full Pressure (184/185PC, G,D)	5.90	6.00	6.15	V
Output at Full Pressure (185PC, A only)	5.85	6.00	6.15	V
Output at Full Pressure (186PC)	5.90	6.00	6.10	V
Span (184/185PC, G,D)	4.95	5.00	5.05	V
Span (185PC, A only)	4.90	5.00	5.10	V
Span (186PC)	---	5.00	---	V
Span (185PC15AT)	4.28	4.33	4.38	V
Span (185PC30AT)	4.62	4.67	4.72	V
Ratiometricity Error				
7 to 8V or 8 to 9V	---	±0.50	---	% Span
9 to 12V	---	±2.00	---	% Span
Temperature Error (Combined null and span)	-2%	0	+2%	% Span
Stability over One Year	---	±0.50	---	% Span
Response Time	---	---	1.00	msec
Weight	---	12	---	grams
Short Circuit Protection	Output may be shorted indefinitely to ground			
Output Ripple	None, DC device			
Ground Reference	Supply and output are common			

Amplified

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40° to +85°C (-40° to +185°F)
Storage Temperature	-55° to +125°C (-67° to +257°F)
Compensated Temperature	0° to +50°C (32° to +122°F)
Shock	MIL-STD-202, Method 213 (50 g, half sine, 6 msec)
Vibration	MIL-STD-202, Method 204 (10 to 2000 Hz at 10 g)
Media	P2 port Wetted materials; polyester housing, epoxy adhesive, silicon, borosilicate glass, and silicon-to-glass bond*
	P2 port Absolute only: Factory sealed vacuum reference, no connection
	P1 port Dry gases only

*Liquid media containing some highly ionic solutions could potentially neutralize the chip-to-glass tube bond.

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184PC SERIES ORDER GUIDE, VACUUM GAGE TYPE

Catalog Listing	Pressure Range psi	Overpressure psi Max.	Linearity, % Span	
			P2 > P1 Max.	P2 < P1 Max.
184PC05GT	0--5	20	---	±1.00
184PC15GT	0--15	45	---	±1.00

185PC SERIES ORDER GUIDE, DIFFERENTIAL TYPE, P2 > P1

Catalog Listing	Pressure Range psi	Overpressure psi Max.	Linearity, % Span	
			P2 > P1 Max.	P2 < P1 Max.
185PC05DT	0-5	20	±2.00	±1.00
185PC15DT	0-15	45	±2.00	±1.00
185PC30DT	0-30	60	±1.50	±0.75

186PC SERIES ORDER GUIDE, BI-DIRECTIONAL TYPE, P2-P1

Catalog Listing	Pressure Range psi	Overpressure psi Max.	Linearity, % Span	
			P2 > P1 Max.	P2 < P1 Max.
186PC03DT	±2.5	20	±2.00	±1.00
186PC05DT	±5.0	20	±2.00	±1.00
186PC15DT	±15	45	±2.00	±1.00

185PC SERIES ORDER GUIDE, ABSOLUTE TYPE

Catalog Listing	Pressure Range psi	Overpressure psi Max.	Linearity, % Span	
			P2 > P1 Max.	P2 < P1 Max.
185PC15AT	0-15	45	---	±1.00
185PC30AT	0-30	60	---	±0.75

HOW TO ORDER

Catalog listings in the order guide are shown with mounting version **T** (terminal mount). **H** (housing mount) also available. Contact 800 number.

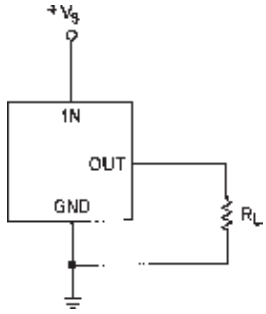
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ELECTRICAL CONNECTIONS

Voltage Excitation



NOTES

1. Terminals are labeled on the sensor.
2. Input and output share a common ground.
3. R_L must be greater than or equal to 3000 ohms.

IDEAL OUTPUT AT $V_s = 8.00 \pm 0.01$ VDC

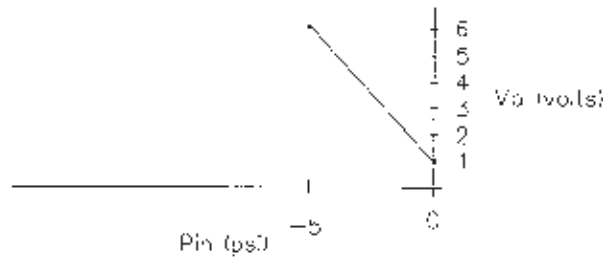
Differential

Example: 185PC15DT when $P_{IN} = P_2 - P_1$



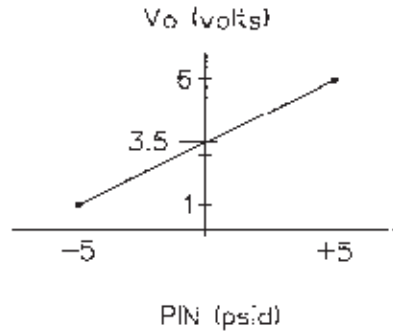
Vacuum Gage

Example: 184PC05GT where $P_2 = P_{IN}$, $P_1 = \text{Ambient}$



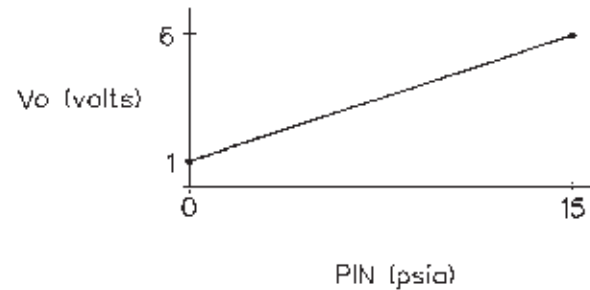
Bi-directional

Example: 186PC05DH where $P_{IN} = P_2 - P_1$



Absolute

Example: 185PC15AP where $P_1 = P_{IN}$, $P_2 = \text{Factory sealed vacuum}$



Amplified

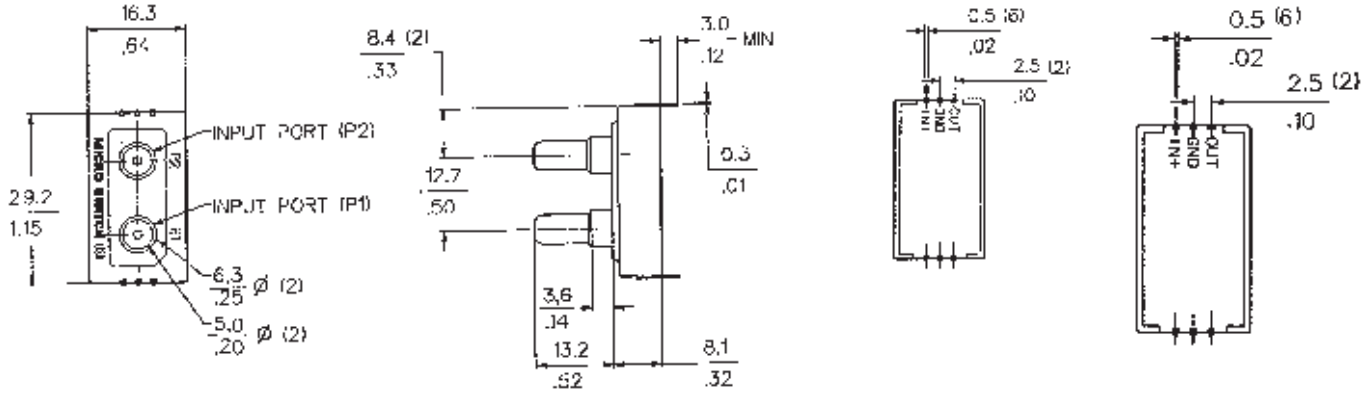
Pressure Sensors

180PC Series

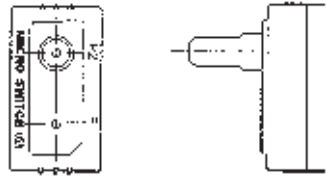
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MOUNTING DIMENSIONS 0.0 = mm
 0.00 = in.

Terminal Mount (Differential "D" or Absolute "A" Housing)



(Gage "G" Housing)



Housing Mount

